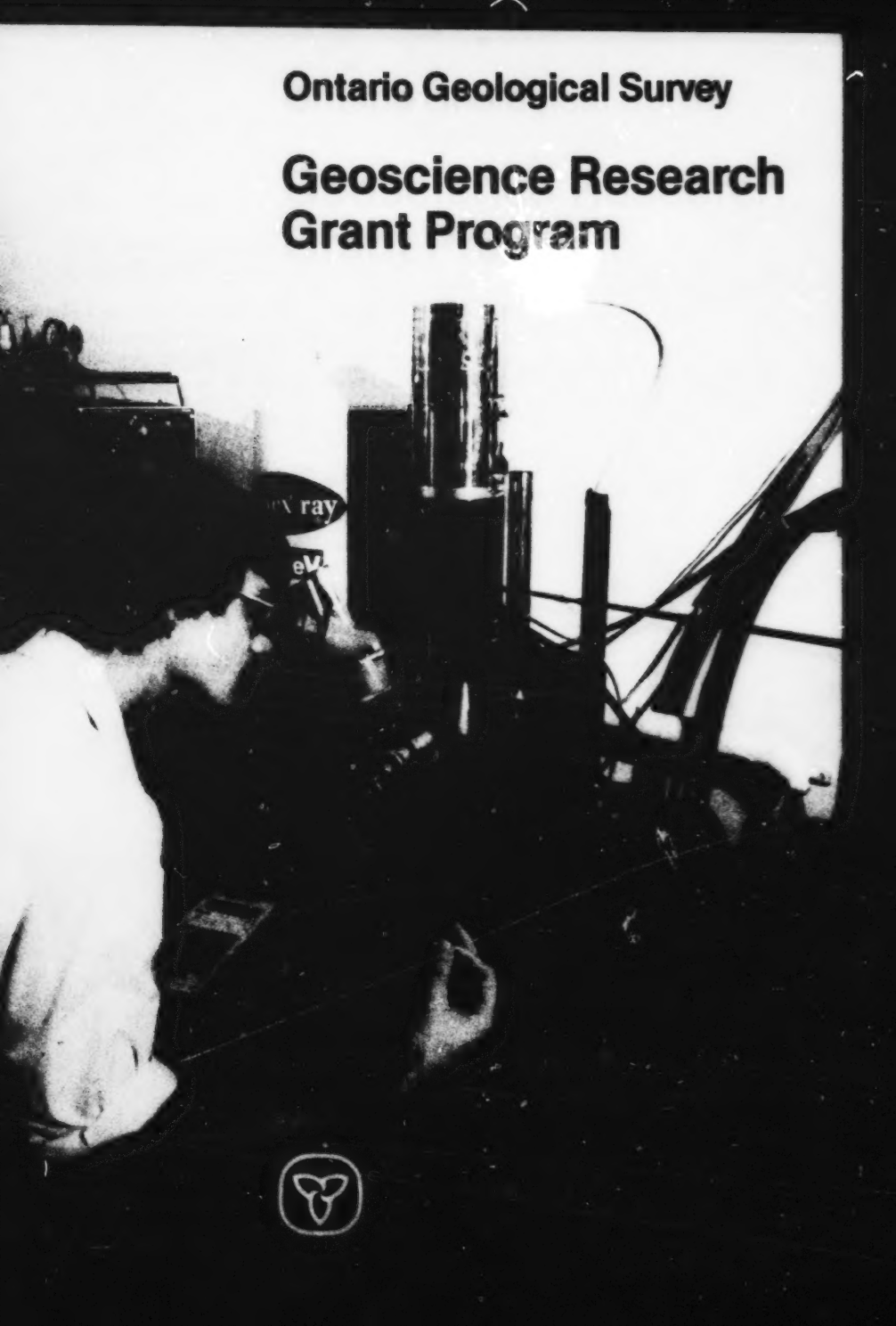
Ontario Geological Survey

Geoscience Research Grant Program



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Foreword

This brochure outlines the Geoscience Research Grant Program of the Ontario Ministry of Natural Resources.

The program, initiated by the ministry in 1978, provides up to $500,000 annually to Ontario universities to finance research projects that will improve mineral deposit identification and stimulate private mineral exploration in the province.

Submission due date:	November 15
Review meeting:	February
Grant notification:	February
Effective funding dates:	April 1 to following March 31

All applications and inquiries should be directed to:

Grants Administrator
Geoscience Research Grant Program
Ontario Ministry of Natural Resources
11th Floor, 77 Grenville Street
Toronto, Ontario M5S 1B3

Telephone: (416) 965-1546

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General Information

Purpose

The Geoscience Research Grant Program is designed to help finance research at Ontario universities that will improve and stimulate mineral exploration in the province. The research work complements the activities of the Ministry of Natural Resources' Ontario Geological Survey (OGS) by such means as:

1. Defining the characteristics of potentially significant geological environments and devising ways to predict areas of valuable mineral resources; and,
2. Providing geological information to assist the ministry's earth resources initiatives.

Areas of Support

Only proposals with significant economic and geological potential will be considered.

Proposals should neither duplicate OGS activities (such as inventories and systematic surveys) nor deal with areas that fall outside the mandate of the OGS (such as mining engineering, monitoring man-made pollution, mineral economics or marketing). For information on OGS activities, consult the current **Summary of Field Work.**

The program supports applied geoscience research, for up to three years, in the following areas:

1. Identifying the characteristics of mineral deposits, by studying specific occurrences, or a group of occurrences selected by common mineral content or geological characteristics.
2. Petrologic, rock geochemistry, structural geology, stratigraphic and geochronologic studies leading to an improved understanding of the factors influencing the origin and localization of mineral deposits, and better definition of the characteristics of their environments.
3. Field and laboratory studies, leading to the development of new geophysical or geochemical concepts and techniques to assist the exploration for ore bodies concealed beneath the bedrock surface, a cover of younger rocks or glacial overburden.

4. Identifying, through engineering and environmental geology, the terrain suitable for urban and industrial development, transportation routes, subsurface storage and waste disposal — or identifying geological characteristics of potentially hazardous terrain in Ontario.
5. Developing methods of interpreting and improving the automated or manual processing of geoscience data.

Note: This program does not support major equipment acquisitions, educational programs or direct mineral exploration. It is not intended to support or supplement basic geoscience research of the type normally eligible for support by national research councils.

Grant Administration

Eligibility

Any faculty member of an Ontario university may submit an application. The university acts as the sponsor of the project.

Sponsor

The university assumes responsibility for payment of all project expenses and maintenance of appropriate accounting records.

Sponsors are expected to provide accounting and administrative services, research and office space, as well as office furniture without charge. Sponsors should ensure that salary requests are in keeping with those paid similarly qualified persons within the agency (see also pg. 4 — **Personnel**). The award does not permit remuneration of the principal investigator or payment of overhead charges. The title to all equipment approved under a grant will be vested in the sponsoring agency.

Application Procedures

Preparation for Application

Before completing an application and proposal, applicants should study **Appendix A — Criteria for Assessment** which outlines the type of questions considered during the review of applications.

When deciding whether to approve an application, the committee members look primarily at a proposal's economic and geologic potential to improve the effectiveness of mineral exploration and development in the province.

The committee considers whether a proposal could have an important economic impact by reducing the risks in mineral exploration and/or increasing the efficiency of exploration. It also examines such things as a proposal's relevance to OGS programs, the likelihood of accomplishing stated objectives and the methods of collecting and analysing data.

For those applying for a renewal of funding, the committee evaluates such things as the progress to date, expenditure forecast and whether the original aims, methods and timetable have been met (see **Renewal Applications**, pg. 16).

Application Contents

The application should consist of the following material in the order given below (a detailed description of each item follows):

- Cover: **Application Form for a Geoscience Research Grant**;
- Budget detail;
- Brief description of research — maximum 500 words;
- Table of contents;
- For new applications — a project proposal;
- For renewal applications — a summary of the project methodology and a progress report;
- Resumes (with new applications, and with renewal applications when a new member has joined or will join the research team);

- Letters indicating co-operation from other individuals/ companies if necessary;
- If necessary, statement concerning other funding;
- If the applicant wishes, recommendations for external appraisers, and;
- Any appendices.

Application Form: A Geoscience Research Grant application form must accompany each proposal. These may be obtained by contacting the grants administrator. Please note that the "Short Title of Project" should be both short and accurate.

Also, the "Synopsis of Project" should clearly state the objective of the research. It should also clearly explain why the research would be of interest to the OGS and how it could benefit the mineral exploration industry.

The synopsis should be written so that anyone with a general geoscience background can understand the significance of the research. It is essential that the importance and value of this research is communicated as clearly and concisely as possible. This synopsis is used to communicate information to semi-technical editors, government officials and the news media and is also valuable to the committee when assigning proposals to reviewers.

Budget detail (see **Appendix B — Sample Budget**): Budget requests should indicate funds required for each fiscal year or part of a fiscal year. They must correspond with the government's fiscal year, which runs from April 1 to March 31. All expenses must fall under the categories outlined below and must not include funding that will come from other sources. The description of each category is meant to be a guide only:

Personnel includes services of professional assistants, graduate students, technicians and other support personnel, including salaries, employer's contributions

to fringe benefits and other payroll items. Maximum salary rates designated by the Natural Sciences and Engineering Research Council (NSERC) are not to be exceeded for graduate students and post-doctoral fellows. Only those NSERC rates in effect when the grant is awarded may be charged during that grant year. University salary guidelines should be followed for others working on the project with the exception of those who are not eligible for a salary from this program (100 per cent salary can only be claimed for those students not receiving any other income at the university, for example, income for assisting/teaching). This applies to technicians as well. Indicate the amount of time all personnel are expected to put into the project. Applicants are not eligible for a salary from this program. Personnel paid from the ministry's grant are not to be regarded as ministry employees.

Travel expenses essential to complete the project, such as field work travel to collect data, are allowable. Travel outside Ontario must receive prior approval from the ministry. This should be specified in the budget request. Grant recipients' travel to conferences will be restricted to attending the annual OGS seminar in December.

Equipment refers to **minor** items which are specifically required to complete the project. As stated on page 2, the grant program does not support major equipment acquisitions. Equipment is defined as items with an expected life of longer than one year. Requests for office equipment (such as tape recorders, calculators, small computers, etc.) will not be considered. If using the university's equipment, the researchers may only charge university internal maintenance rates.

Supplies and Materials include expendable items such as chemicals, glassware, stationery and field supplies.

Support Services may include fees for thin sections, analytical services, duplicating, computer use, photography, etc. (For computer services, state the number of hours and hourly rate.)

> **Note:** Specify the fiscal period(s) described. Provide justification for any costly or unusual items. Brief explanations of major items in the budget may avoid requests for further explanations during the review process. Any commitments incurred in excess of the approved budget are not the responsibility of the ministry.

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Brief Description of Research: The description should be 500 words or less, and include the objectives of the proposed research, the method of investigation, expected results, and the anticipated timetable.

Table of Contents: This one-page table should list all the material contained in the application, including any appendices.

New Applications: The proposal should include the following detailed information:

- The objectives of the research and the underlying hypotheses;
- The present state of knowledge relative to proposed research and relevant work done by the applicant, including references to significant publications;
- The relevance of the proposal to geoscience programs of the province and the benefits to economic geology or mineral exploration expected, and;
- The design, methodology and timetable.

Renewal Applications: Funding beyond the first year is based on an annual review. A renewal application must be submitted by November 15 to obtain funding for the following fiscal year. The same form is used for both new applications and renewals. However, the renewal application must include a brief summary of the original proposal as well as a progress report on the work carried out to date (see **Appendix A — Renewal Applications**). The progress report must include a breakdown, by category, of expenses to date and a forecast of expenses for the balance of the current year. The progress report should be concise and include a description of technical progress and results obtained.

Resumes: Information should be provided about the applicant, co-applicant(s), and any senior personnel employed on the project (such as professional assistants, research associates and PhDs). The information should be no more than three pages long for each individual, and should include the following:

- Personal data — name, address, date of birth;
- Education — university, course, degree and date;
- Research experience — dates, institution, department, position;
- Appointments held;
- Publications during the past five years;
- Research funding received/requested during the past three years, and;
- Patents held or applied for in this area of research.

Note: Resumes do not constitute part of the 20-page limit on applications. Resumes do not have to accompany renewal applications, unless a new researcher is working on the project.

Co-operation from others: If the proposed project requires the support and co-operation of other professionals, departments, agencies or companies (such as permission for access to private property), their willingness to co-operate must be confirmed in writing and a copy of the confirmation attached to the application. An applicant must also disclose any other existing sources and requests for funding for the proposed project.

Appendices: Relevant appendices may be added to the application. They should be distinct from the application itself, but should be listed in the table of contents. However, they will not necessarily be considered in the evaluation of the project. They should be limited to a maximum of 30 pages.

Submission Details

Six copies, including the original, of all documents must accompany the application.

Applications are limited to 20 typewritten pages, double spaced on A4 metric or 8½-by-11 inch paper. The complete research proposal must be contained within the 20-page application. Appendices are to be limited to a maximum of 30 pages.

All applications must be received on or before November 15. Approved applications are initially funded for a 12-month period, from April 1 to the following March 31.

Review Process

Review Committee

The Geoscience Research Review Committee evaluates the applications and is responsible for approving grants from a predetermined budget.

The review committee consists of geoscience experts from the minerals industry, Ontario universities and the OGS. All members are appointed by the ministry, in consultation with the chairperson, for a three-year term, renewable once. There are 11 voting members on the committee. The Director of the OGS is a non-voting member.

When a committee member has a conflict of interest, such as being from the same university as an applicant, that member will not be present during any discussion or voting concerning that application. In such a case, the member would not have access to any of the committee's comments.

Committee members are expected to evaluate each proposal in accordance with the written guidelines (see **Appendix A — Criteria For Assessment**), their own best judgment and the comments received from external appraisers. An interview with the applicant or a site visit may also be conducted.

Two committee members per proposal are assigned to provide both a written and an oral presentation on the application at the committee's annual meeting. They must be prepared to support their recommendations and provide sound guidance concerning the budget.

A vote then decides which projects should be approved, and how much funding should be allocated to each.

All committee members are sufficiently familiar with each application to participate in the discussions and decisions.

External Appraisers

Once an application has been received, committee members recommend external appraisers who will be invited by the ministry to comment on the application. The applicant, in a covering letter, may wish to submit the names of up to three individuals knowledgeable in the applicant's area of research. They may or may not be invited to submit appraisals. An OGS and ministry regional appraisal will also be provided for each proposal. All of these comments are sent to the review committee before its annual meeting in February.

Site Visits

Review committee members will visit Ontario university geoscience departments every one to two years to hold program information sessions with interested faculty members.

An application interview or site visit may also be conducted on the initiative of the review committee.

Notification of Awards

As soon as possible after the final decisions are made, all applicants will be notified initially by phone and later by mail. **Reasons will not be given for refusing to award a grant.**

The notification of an award will be sent to the head of the university's research office and the applicant. It will state the particulars of the grant.

Funding of any project may be terminated by the ministry upon 60 days written notice. Termination may result from lack of progress.

Method of Payment

Grant payments will be made to the sponsor in two semi-annual installments (late April and early October).

Researchers will be required to submit a detailed budget and proposed cash flow statement for approval before grant payments will be made.

A statement of expenditures for categories will be required for April 1 to September 30 and October 1 to March 31. This statement must be received no later than one month after each expiry date.

Projects, which receive approval from the review committee to do so, may transfer unused funds from one fiscal year to the next. In the event of project termination or completion, unused monies must be returned to the Government of Ontario.

A clear audit trail must be maintained for each project which may be subject to a post-audit review by ministry auditors.

Budget Amendments

The researcher must stay within the approved budget for each category and advise the ministry of any major alteration in the project.

Requests for amendments to the budget should be made in writing before expenditures occur. A complete justification for the change is required. Requests for major amendments to the budget may require committee approval. Final requests for amendments should be made prior to March 1.

Reporting of Research

The review committee may request that within 12 months of the termination of the research project, all data and other materials obtained as a result of the project must be made available to the public in a data repository maintained by the ministry.

If a researcher, during the course of the research, obtains data considered to be of a commercially sensitive nature, this must be discussed with the ministry. If deemed in the best interests of the government, this data will be publicly released by the government and the participating university at a specific time and date.

Aside from handling sensitive data, it is clearly understood that a researcher will be free to publish the data and results of the work in scientific journals, providing that the source of funding and all relevant work by ministry staff are properly acknowledged. The OGS, at its discretion, may appoint a liaison officer for any project.

Annual Summary Report

By June 1, the researcher must submit a brief annual summary report on the results of the research work completed over the previous fiscal year. This will be published in the annual OGS publication **Geoscience Research Grant Program, Summary of Research.** The report must be completed in a form and to a standard suitable for reproduction and publication (see **Appendix D — Annual Summary Report**).

Annual OGS Seminar

An annual two-day **Geoscience Research Seminar** is sponsored by the Ontario Ministry of Natural Resources each December. The geoscience research grant recipients report their progress to date as part of the seminar program through high-quality poster displays or brief talks. Research summaries (see Annual Summary Report) will be released at this time.

Grant recipients who have submitted a renewal application will be interviewed at the seminar by a member of the review committee. This will provide an opportunity for the grant recipient to update project progress before the review meetings.

Final Report

Four copies of a final report should be submitted not later than six months after the termination of ministry funding.

The final report should contain a comprehensive summary on the findings obtained during the period of the grant, together with supporting data. The final report may consist, in part, of reprints or preprints of publications and copies of presentations given at scientific meetings. As part of the ongoing evaluation of this program, final reports are subject to critical evaluation in accordance with the **Criteria for Evaluation of Final Reports** (see **Appendix C**). Final report reviews may be used by the review committee to evaluate subsequent applications.

Although final reports are the property of the applicants and the sponsoring universities, they should be made available to the general public. Six months after receiving the final report, the ministry has the right to place the report in a data repository maintained by the ministry and available to the public.

Publications

Grant recipients are encouraged to seek publication of project results in appropriate journals. The following statement of acknowledgment should be included:

"This project was supported (in full or part)...(state grant and number)...by the Ontario Geological Survey of the Ministry of Natural Resources."

Patents

The university will have patent rights to any invention developed through this program. The government, in co-operation with the university, will have a royalty-free licence to use patented inventions for its own purposes, but not for manufacture or sale.

Software Development

Software developed under this program should not be used by the researcher as a means of generating revenue. The grant recipient should state in the project final report that this software is available to the general public in a particular format and at a specific location. Generally, software development should not be specific to any one instrument but should be applicable to more than one piece of equipment. Software should be made available to the public.

Inquiries

Applications and inquiries should be directed to:

Grants Administrator
Geoscience Research Grant Program
Ontario Ministry of Natural Resources
11th Floor, 77 Grenville Street
Toronto, Ontario M5S 1B3

Telephone: (416) 965-1546

Appendix A — Criteria for Assessment

When reviewing applications, the committee reviewers and external appraisers consider the following:

New Applications

Economic Aspects
Will the proposal have an important economic impact in reducing the risks in mineral exploration, increasing the efficiency of exploration or contributing significantly to earth resource management in Ontario?

Project Assessment
Are the objectives clearly stated? Is the proposal relevant to Ontario Geological Survey programs.

What is the merit of the proposal with respect to:

- Feasibility of accomplishing stated aims;
- Experimental design/methodology;
- Methods of data collection/analysis;
- Evaluation of results, and;
- The applicant's awareness of other work done in this area.

Applicant(s)
Are the training and accomplishments of the applicant(s) suitable for the proposed study?

Resources
Are the facilities and the personnel adequate to carry out this study?

Has the applicant documented evidence of support (such as a letter of intent) from organizations and individuals whose co-operation may be required?

Budget
Is the budget realistic in terms of the aims of the proposal? Are all items justified? Are there any items which should be reduced or deleted?

Renewal Applications (Progress Report)

- Is the technical progress report thorough?
- Evaluate the results obtained. This is especially important in the first year. If there is little or no progress, why not?
- Is the expenditure forecast for the current year reasonable?
- Have the original aims and methods been modified?
- Has the applicant adhered to the original timetable?
- Does it seem probable that the project will be completed on schedule?
- Is adequate justification provided for departures from the original aims, methods and/or timetable?
- Are revised budget and staffing details justified?
- Evaluate the progress to date.

Decisions on Applications

- Decide such things as whether a project should be approved, rejected, receive partial or full funding, or be deferred.

Appendix B — Sample Budget

Budget requests should indicate funds required for each fiscal year or part of a fiscal year. They should correspond with the government's fiscal year, which runs from April 1 to March 31.

Personnel Services

(State percentage of time used and cost)	No. of people	% time*	$
1. Professional assistant			
2. Post-doctoral fellow (post PhD)	1	100%	$
3. Research trainees (graduate students — B.Sc., M.Sc. or PhD)	1	50%	$
4. Undergraduate students	2	100%	$
5. Technicians	1	75%	$
6. Other personnel			
7. Employer contribution to fringe benefits			

*Percentage should be calculated over a 12 month period (April 1 — March 31)

Travel

$

8. Field work travel.

Equipment

$

9. List items with individual amounts or group minor items. (Please consider rental and give comparative costs.)

Supplies and Materials

$

10. List items or groups of items (number of units and unit costs), for example:
    — field work supplies
    — laboratory supplies
    — 10 containers @ $50 each
    — stationery and forms

Support Services

Fees for:

$

11. Photocopying or duplicating.
12. Photography, art work or drafting.
13. Computer time (quote hourly rate and number of hours).
14. Keypunching and verifying.
15. Thin and polished sections.
16. Analytical work and sample preparation.

Note: Brief explanations of major items in the budget may avoid requests for further information during the review period. Examples: 1. "The professional assistant will be required to . . . ; 4. The summer student is essential for . . . ; 13. Number of hours of computer time necessary is . . . "

Appendix C — Criteria for Evaluation of Final Reports

Final reports will be evaluated on the following basis:

1. Experimental design and methodology. (If a project was unsuccessful, what went wrong and why?)
2. Study outcome:
   - To what extent were the original aims fulfilled?;
   - Are the conclusions/results soundly based?;
   - To what extent did the project contribute to the objectives of the Ontario Geological Survey?;
   - Did any knowledge result from unexpected or additional findings?;
   - Can the data be further analysed to provide additional information?, and;
   - Do the results obtained justify the funds expended.
3. Dissemination of results:
   - What are the applicant's plans for publishing or disseminating the results?
4. Recommendations:
   - Is there need for further study in this area?
   - Make any specific recommendations for distributing study findings.

Appendix D — Annual Summary Report

The annual summary report is due June 1 and must conform to the following:

- General report style is to conform to current OGS standards.
- Manuscripts should be typewritten, double-spaced, on 8½-by-11 inch or A4 metric sized paper; 1½ inch margins should be left on each side of the page.
- The manuscript should not exceed 3,000 words in length, exclusive of the abstract and references. The original and two copies are required.
- An abstract of not more than 200 words, giving an informative condensation of the essential parts of the report and the principal findings is required.
- Follow OGS Report (formerly Geoscience Report) style for references, line drawings and maps.
- Photographs should be of good quality, high contrast, on glossy paper, and should be essential to the report.
- Sample report pages with explicit instructions will be sent to each grant recipient by the grants administrator.
- The Ontario Geological Survey reserves the right to accept for publication and edit, or otherwise reject, any manuscript.